

Wickert et al.
Serial No. 09/893,608

Amendments to the Specification:

Please replace paragraph [0003] with the following paragraph:

[0003] Although some heavy-duty gas turbines conventionally used for power generation have been known to incorporate variable inlet guide vanes, the use of variable stator vanes in addition to variable inlet guide vanes has been relatively uncommon (at least prior to the introduction of GE's General Electric's H-Series Gas Turbines[[I]]). Such variable stator vanes provide the ability to adjust airflow incidence angle (i.e., the difference between the air angle and the mean line angle at the compressor blade leading edge) in the front stages of the compressor so that an acceptable compressor surge-free operational margin may be maintained. Typically, maintaining surge-free operation is a vital critical-to-quality (CTQ) operational criterion of the compressor component for these types of gas turbines.

Please replace paragraph [0005] with the following paragraph:

[0005] In one aspect, the present invention overcomes problems associated with over-firing of gas turbines equipped with variable stator vanes (blades) to compensate for power output during under-frequency events by utilizing the variable stator vanes to increase the amount of airflow consumed by the compressor component in a predefined manner so as to preclude and/or minimize a decrease in the level of output power generated during a grid under-frequency event. In another aspect, the present invention overcomes surge problems associated with increasing the power output of a gas turbine equipped with variable stator vanes by maintaining operation within a safe surge margin during the occurrence of a power grid under-frequency event. In a further aspect, the present invention overcomes potential operational problems that may occur as a result of switching between nominal operating conditions and power grid "under-frequency" operational conditions.

Please replace paragraph [0006] with the following paragraph:

[0006] Varying the angle of the inlet and stator vanes of the compressor component alters the overall airflow volume consumed by the compressor and affects the

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resultant turbine output power produced. ~~In the~~ The method of the present invention[[,]] relates to gas turbine systems wherein ~~the variable inlet guide vanes and one or more of the front variable stator vanes (VSV) of a the compressor component for a gas turbine~~ are ganged together by means of a common actuation mechanism. Operational schedules for varying angular positions of the ganged stator vanes with respect to corrected physical compressor speed are defined for both ~~nominal-normal~~ and "under-frequency" power grid operating conditions to provide optimum compressor efficiency without violating minimum safe compressor surge margin criteria. A compressor operational method and strategy is provided for controlling the angular position of the ganged compressor vanes in a manner that ensures smooth transitions between nominal and under-frequency (or vice versa) operational schedules during and/or subsequent to the occurrence of power grid under-frequency events.

Please add the following new paragraph after paragraph [0009]:

[0009.1] FIGURE 3 is a block diagram illustrating an example gas turbine system having a compressor component, variable stator vanes, a variable stator vane (VSV) actuator and vane angle controller, and generator output to an electric power grid.